

Amendments to the Specification:

Please replace the paragraph beginning on page 7, line 1 and ending on page 7, line 16, with the following amended paragraph:

The plasma spray gun 120 typically comprises a copper anode 122 and tungsten cathode 124, both of which are water cooled. Plasma gas 126 (argon, nitrogen, hydrogen, helium) flows around the cathode in the direction generally indicated by arrow 128 and through an anode ~~[[130]]~~ 122 which is shaped as a constricting nozzle. The plasma is initiated by a high voltage discharge which causes localized ionization and a conductive path for a DC arc to form between the cathode 124 and the anode ~~[[130]]~~ 122. Resistance heating from the arc causes the gas to reach extreme temperatures, dissociate and ionize to form a plasma. The plasma exits the anode nozzle ~~[[130]]~~ 122 as a free or neutral plasma flame (plasma which does not carry electric current). When the plasma is stabilized ready for spraying, the electric arc extends down the nozzle. Powder 112 is fed into the plasma flame usually via an external powder port 132 mounted near the anode nozzle exit ~~[[134]]~~. The powder 112 is so rapidly heated and accelerated that the spray distance 136 (the distance between the nozzle tip and the substrate surface) can be on the order of 125 to 150 mm. Plasma sprayed coatings are thus produced by a process in which molten or heat-softened particles are caused to impact on a substrate.

Please replace the paragraph beginning on page 10, line 3 and ending on page 10, line 13, with the following amended paragraph:

FIG. 3 illustrates a plasma reactor of the aforementioned type. The reactor comprises a reactor chamber 10 that includes a substrate holder 12 including an electrostatic chuck 34 which provides a clamping force to a substrate 13 as well as an RF bias to a substrate. The substrate can be back-cooled using a heat transfer gas such as helium. A focus ring 14 comprises a dielectric outer ring ~~[[14a]]~~ and an inner ring ~~[[14b]]~~ which confines plasma in an area above the substrate. A source of energy for maintaining a high density (e.g., 10^{11} - 10^{12} ions/cm³) plasma in the chamber such as an antenna 18 powered by a suitable RF source to provide a high density plasma is disposed at the top of reactor chamber 10. The chamber includes suitable vacuum

pumping apparatus for maintaining the interior of the chamber at a desired pressure (e.g., below 50 mTorr, typically 1 - 20 mTorr).